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ATTENTION ASSOCIATE MEDICAL EXAMINERS

April 15, 1983 - Salt Lake City - A one day course for general pathologists in forensic pathology. Faculty - Wally Graham, Utah M.E., Bill Brady, Oregon M.E. and Chuck Petty, Dallas M.E. - $85.00. For more information call (801) 531-5848.

FROM THE TOXICOLOGY SECTION

The past few years, there has been a substantial increase in the number of Syva Emit® systems being utilized by both clinical and forensic laboratories in Montana. This increase has come about to meet the demand by clinicians for regimen of therapeutic drug monitoring (TDM) and by E.R. physicians for stat drug screens. A few words of caution should be noted. Be aware of which drugs may cross-react in the assays being used. Approximately 50% of all overdoses are polypharmaceutical, thereby increasing the chances of cross-reactions. Positive results should be confirmed by an alternative method when Emit®/d.au, Emit® Serum Tox, or Emit®-st are used.

There has been an increasing concern among coroners and some pathalogists as to why there is often a 10-20% difference in blood alcohol levels in split samples - one analyzed by a local hospital and one sent here for legal purposes. Quite often, the answer is because of the different analysis techniques used. Most hospital labs use serum in an enzymatic assay. The forensic lab uses whole blood in a FID/GC technique, which is the preferred method of the forensic community.

Published data note the difference in serum/whole ratio for ethyl alcohol as being 1.12-1.20/1.0. The explanation is two-fold. One - the distribution of body water is higher in serum and plasma than in whole blood. Second - the varying hematocrit in blood samples can cause a difference in serum/whole blood ratio.

ON CALL SCHEDULE - MONTANA STATE MEDICAL EXAMINER

APRIL 1983

275 W. Front Street
Missoula, Montana 59802

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2 RON RIVERS
3 RON RIVERS	4	5	6	7	8	9 JOHN PFAFF
10 JOHN PFAFF	11	12	13	14	15	16 KEN MUELLER
17 KEN MUELLER	18	19	20	21	22	23 RON RIVERS
24 RON RIVERS	25	26	27	28	29	30 JOHN PFAFF

Telephone Numbers: State Office - 728-4970
WATS Line - 243-5796

Home Phone: Dr. Ron Rivers- 728-2033 (Home)
(week nights call unless otherwise indicated)

Dr. John Pfaff - Great Falls
Hospital - 727-3333
Home - 727-3905

Dr. Ken Mueller- Billings
Hospital - 657-7000
Home - 248-3024

"We don't want any autopsy!" the father said. "He suffered enough already." tearfully exclaimed the mother.

Their 22 year old son had just died in the emergency room after sustaining a severe head injury at the Acme Manufacturing Company. The plant manager explained to the coroner that it looked like the machine the victim was operating stopped for no reason whatsoever. "Apparently he stuck his head inside to see what was wrong and it suddenly came on again. It must have happened five to ten minutes before we found him."

When the family physician arrived he told the coroner, "The boy has been healthy all his life. As far as I know he never took any drugs or had an alcohol problem. I'll sign the death certificate. He has obviously died from head injuries."

QUESTIONS:

1. Would you order an autopsy on this case?

2. The accident occured at 1030 hours. Would any toxicology be necessary?

3. Should the coroner visit the scene or wait for the companies — report of the accident?

ANSWERS:

1) A coroner would be under considerable duress to order an autopsy in this circumstance. The family is objecting, the physician will sign the certificate as to the cause of death and the coroner's budget is probably over spent. The county commissioners may demand a "show need" in this case. If the coroner explains that civil litigation may arise, the commissioners may counter with the often quoted, "We aren't doing autopsies for insurance companies!".

   None of us do autopsies for insurance companies. We do them for the families and the communities in which we live (and pay taxes!). Perhaps the young man was negligent and the company was not. Then the company gets off the hook and the coroner is accused of taking sides with big business. But what if you owned the business? You wouldn't want to pay a bankrupting sum of money in an unjustifiable settlement. And that's what the coroner and his autopsies are about. To uphold justice in his or her community - irregardless of whether it is criminal or civil justice.

2) Irregardless of the time of day, toxicological analysis should be performed. Only a chronic abuser of drugs and/or alcohol would be high at that hour but many people take medicine around the clock.

   There is always the possibility that the doctor did not know the boy had become an alcoholic or an addict. You would certainly hope he knew if he was a diabetic or an epiliptic. But perhaps not. How to tell? Order a complete autopsy.

   The family would get over the fact that an autopsy was ordered despite their objection. But they won't get over their doubts and suspicions if the company has a witness that states he was taking pills just before the accident.

3) Visit the scene. And take an impartial worker to explain the technology if necessary. A safety screen may be missing. A safety switch may be locked on or not even provided. Has the company been cited before for safety violations? Are there other obvious hazardous conditions? Was adequate training and on-the-job safety explained to the youth?

   Civil suits are often in the millions of dollars with fancy lawyers. The coroner will need as much information as possible to help the jury give a justifiable verdict.

   There is also criminal as well as civil negligence. If the death occurred in violations of some government safety law a criminal charge could be filed. In their efforts to provide justice the coroners also prevent other needless deaths.